

SW VGA Ars Series

VGA AND STEREO AUDIO SWITCHERS

- 350 MHz (-3dB) RGB video bandwidth
- Compatible with VGA-QXGA and HDTV component video signals
- Auto-input switching
- Input signal sensing
- Active PC audio buffering
- RS-232 and contact closure remote control
- IR Control - With optional IR 102 Kit
- Internal universal power supply



SW6 VGA Ars



SW12 VGA Ars

The SW VGA Series of switchers consists of five models in sizes from two to twelve inputs. SW VGA Series switchers allow multiple high resolution computer or HDTV component video signals to be switched to one or two displays. They are ideal for small to mid-sized applications where high resolution switching is needed.



Extron® Electronics
www.extron.com

DESCRIPTION

The **SW VGA Series** are VGA switchers with two, four, six, eight, and twelve inputs. They are designed for applications where multiple high resolution computer video and HDTV component video signals must be switched to one or two displays. The SW VGA Series switchers are ideal for small to mid-sized applications where high resolution switching is needed. There are several key features common to all models in this series which benefit integrators and end-users, alike.

All models feature input signal sensing, which automatically detects which inputs have an active signal and reports that information through the RS-232 port for confirmation of active inputs on third party control systems. This offers quick confirmation of active inputs on any third-party control system. Another feature common to all models is Auto-input switching, which automatically switches to the highest-numbered input with an active video signal. All switchers in this series can also be controlled via their front panel, RS-232, and contact closure remote control, and via the optional **Extron IR 102 handheld remote control**. All of the SW VGA models are housed in 1U, rack-mountable metal enclosures, for easy integration into new or existing A/V environments.

All SW VGA Series switchers feature active PC audio buffering, which converts unbalanced PC audio to balanced, line level signals, eliminating noise over long cable runs. The switchers accept PC audio input on 3.5mm mini stereo jacks for fast, easy connection with pre-terminated Extron VGA and Audio cables. Balanced or unbalanced audio is output on captive screw connectors.

The SW8 VGA and SW12 VGA Series feature dual buffered video and audio outputs which simultaneously output program video and audio on two parallel outputs. This eliminates the additional cost of a VGA & audio distribution amplifier for dual-display applications.

COMMON FEATURES

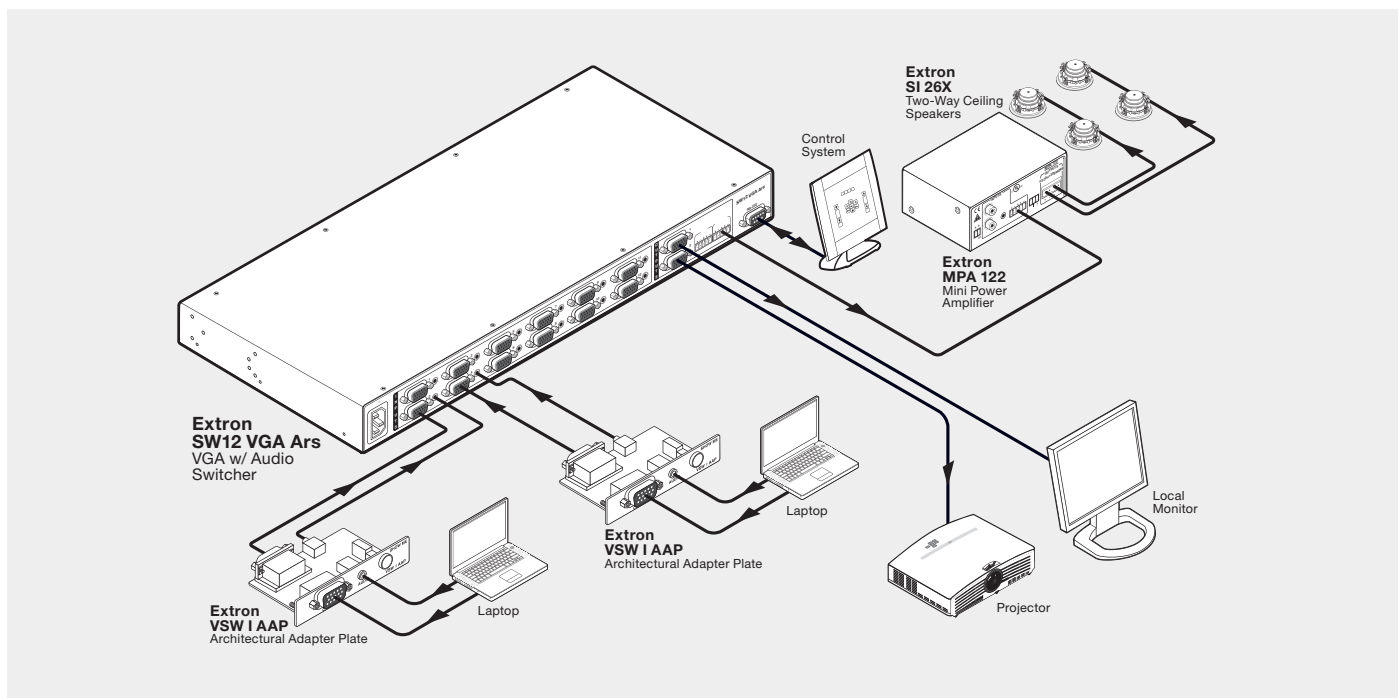
- **350 MHz (-3dB) RGB video bandwidth** – Offers the performance required to maintain signal integrity with the most demanding high resolution signals.
- **Compatible with VGA-QXGA and HDTV component video signals**
- **Auto-input switching** – Automatically switches to the highest-numbered input with an active video signal.
- **Input signal sensing** – Automatically detects which inputs have an active signal and reports that information through the RS-232 port for confirmation of active inputs on third party control systems.
- **Switches balanced and unbalanced stereo audio**
- **Active PC audio buffering** – converts unbalanced PC audio to balanced, line level signals, eliminating noise over long cable runs.
- **Compatible with Extron VSW I AAP** – The optional VSW I AAP provides remote input connection and selection, which is useful in multiple-participant presentation environments.
- **Multiple control options** – Switcher operations can be controlled through the front panel, RS-232, or contact closure.
- **IR control** – The SW VGA Series switchers can be conveniently controlled via IR remote control with the optional Extron IR 102 Kit.
- **Internal universal power supply** – The 100-240VAC, 50/60 Hz, international power supply provides worldwide power compatibility.

UNIQUE FEATURES - SW2, SW4 & SW6 VGA SERIES

- **Two, four, or six inputs**
- **One output**
- **1U, half rack width metal enclosure**

UNIQUE FEATURES - SW8 & SW12 VGA SERIES

- **Eight and twelve inputs**
- **Audio output volume control via RS-232** – Eliminates the need for a separate audio preamp in many system designs.
- **Dual buffered video and audio outputs** – Simultaneously output program video and audio on two parallel outputs, eliminating the additional cost of a VGA & audio distribution amplifier for dual-display applications.
- **1U, full rack width metal enclosure**



VIDEO	
Gain	Unity
Bandwidth	350 MHz (-3 dB)
Crosstalk	-68 dB @ 10 MHz
VIDEO INPUT	
Number/signal type	2, 4, 6, 8, or 12 (depending on the model) VGA-QXGA RGBHV, RGBS, RGsB, RsGsBs computer video, and HDTV component video
Connectors	Female 15-pin HD
Nominal level	1.0 Vp-p for Y of component video 0.7 Vp-p for RGB and for R-Y and B-Y of component video
Minimum/maximum levels	Analog: 0.3 V to 1.5 Vp-p with no offset
Impedance	75 ohms
Horizontal frequency	15 kHz to 145 kHz
Vertical frequency	30 Hz to 170 Hz
Return loss	-40 dB @ 5 MHz
Input coupling	DC
VIDEO OUTPUT	
Number/signal type	1 VGA-QXGA RGBHV, RGBS, RGsB, RsGsBs computer video, and HDTV component video (follows input type)
SW8/12 VGA Series	2 VGA-QXGA RGBHV, RGBS, RGsB, RsGsBs computer video, and HDTV component video (follows input type)
Connectors	1 female 15-pin HD 2 female 15-pin HD
Nominal level	1.0 Vp-p for Y of component video 0.7 Vp-p for RGB and for R-Y and B-Y of component video
Minimum/maximum levels	0.3 V to 1.5 Vp-p (follows input)
Impedance	75 ohms
Return loss	-43 dB @ 5 MHz
DC offset	±5 mV with input at 0 offset
SYNC	
Input type	RGBHV, RGBS, RGsB, RsGsBs, bi-level and tri-level sync
Output type	RGBHV, RGBS, RGsB, RsGsBs, bi-level and tri-level sync (follows input)
Input level	1.0 V to 5.0 Vp-p
Output level	TTL: 5.0 Vp-p, unterminated
Input impedance	510 ohms
Output impedance	75 ohms
Max. propagation delay	47 ns
SW2/4/6 VGA Series	54 ns
SW8/12 VGA Series	
Max. rise/fall time	4.2 ns
SW2/4/6 VGA Series	4.7 ns
SW8/12 VGA Series	
Polarity	Positive or negative (follows input)
AUDIO	
SW2/4/6 VGA Series	Unbal. output: +6 dB; bal. output: +12 dB
SW8/12 VGA Series	Unbal. output: +0 dB; bal. output: +6 dB
Frequency response	20 Hz to 20 kHz, ±0.05 dB
THD + Noise	0.01% @ 1 kHz at nominal level
S/N	>90 dB at maximum output (unweighted)
Crosstalk	-45 dB @ 1 kHz, fully loaded
Stereo channel separation	>80 dB @ 20 Hz to 20 kHz
SW2/4/6 VGA Series	>80 dB 1 kHz
SW8/12 VGA Series	
AUDIO INPUT	
Number/signal type	Stereo, unbalanced
Connectors	Female 3.5 mm stereo mini jacks; tip (L), ring (R), sleeve (Gnd)
Impedance	>10k ohms unbalanced, DC coupled
Nominal level	-10 dBV (316 mV)
Maximum level	SW2/4/6 VGA Series +16 dBV, (unbalanced) at 1% THD+N SW8/12 VGA Series +14 dBV, (unbalanced) at 1% THD+N
NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu	

AUDIO OUTPUT	
Number/signal type	
SW2/4/6 VGA Series	1 stereo, balanced/unbalanced
SW8/12 VGA Series	2 stereo, balanced/unbalanced
Connectors	
SW2/4/6 VGA Series	(1) 3.5 mm captive screw connector, 5 pole
SW8/12 VGA Series	(2) 3.5 mm captive screw connectors, 5 pole
Impedance	50 ohms unbalanced, 100 ohms balanced
Nominal level	
SW2/4/6 VGA Series	+4 dBu (1.23 V), balanced
	-4 dBV (0.63 V), unbalanced
SW8/12 VGA Series	+4 dBu (1.23 Vrms), balanced
	-10 dBV (316 mVrms), unbalanced
Variable output volume range (SW8/12 VGA Series only)	
	0 to 100 (-84 dB to 0 dB),
	default = 100 = 0 dB
Maximum level (Hi-Z)	+28 dBu, balanced; +20 dBV, unbalanced at 1%THD+N
Maximum level (600 ohm)	+21 dBm, balanced; +18 dBm, unbalanced at 1%THD+N

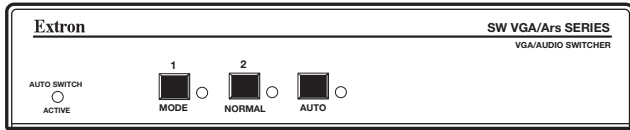
CONTROL/REMOTE — SWITCHER	
Serial control port	
SW2/4/6 VGA Series	RS-232 9-pin female D connector (shared with contact closure)
SW8/12 VGA Series	RS-232 9-pin female D connector
Baud rate and protocol	9600 baud, 8 data bits, 1 stop bit, no parity
Serial control pin configurations	2 = TX, 3 = RX, 5 = GND
Contact closure (SW2/4/6 VGA Series only)	RS-232 9-pin female D connector (shared with RS-232)
Contact closure pin configurations (SW2/4/6 VGA Series only)	
	1 = input #1, 4 = input #2,
	6 = input #3, 7 = input #4,
	8 = input #5, 9 = input #6; active when a pin momentarily shorts to ground
"Show Me" contact closure	Pin 5 of each VGA input connector.
	The input is active (selected) when pin 5 momentarily goes to ground.
Program control	Extron's Universal Switcher control/configuration program for Windows®
	Extron's Simple Instruction Set (SIS™)

GENERAL	
Power	100 VAC to 240 VAC, 50/60 Hz, 10 watts, internal
Cooling	Convection, no vents
Mounting	
Rack mount	Yes, with optional 1U, 9.5" deep rack shelf (RSU 129, #60-190-01; RSB 129, 60-604-01)
Furniture mount	Yes, with optional under-desk mounting kit, part #70-077-01 (MBU 125), or through-desk mounting kit, part #70-077-02 (MBD 129)
Enclosure type	Metal
Enclosure dimensions (Depth excludes connectors.)	
SW2/4/6 VGA Series	1.75" H x 8.75" W x 9.5" D (1U high, half rack wide) (4.4 cm H x 22.2 cm W x 24.1 cm D)
SW8/12 VGA Ars	1.75" H x 17.5" W x 9.5" D (1U high, full rack wide) (4.4 cm H x 44.4 cm W x 24.1 cm D) (Depth excludes connectors)
Product weight	
SW2/4/6 VGA Series	2.5 lbs (1.1 kg)
SW8/12 VGA Ars	6.3 lbs (2.9 kg)
Shipping weight	
SW2/4/6 VGA Series	5 lbs (3 kg)
SW8/12 VGA Ars	11 lbs (5 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Listings	UL, CUL
Compliances	CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF	30,000 hours
Warranty	3 years parts and labor
NOTE: All nominal levels are at ±10%.	

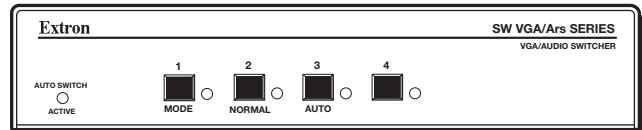
Model	Version Description	Part Number
SW2 VGA Ars	Two Input VGA with Audio	60-257-22
SW4 VGA Ars	Four Input VGA with Audio	60-258-22
SW6 VGA Ars	Six Input VGA with Audio	60-259-22
SW8 VGA Ars	Eight Input VGA with Audio	60-902-21
SW12 VGA Ars	Twelve Input VGA with Audio	60-946-21

Specifications are subject to change without notice.

PANEL DRAWINGS



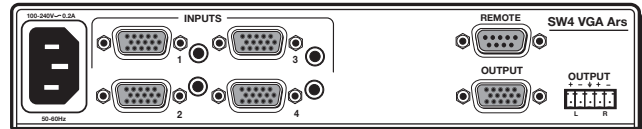
SW2 VGA Ars - Front



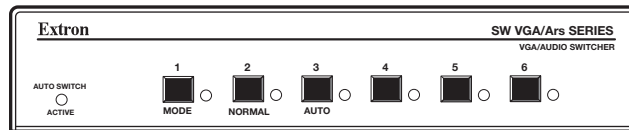
SW4 VGA Ars - Front



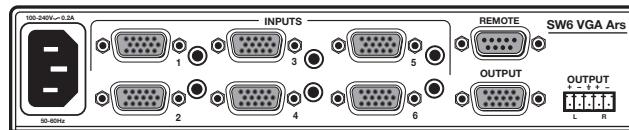
SW2 VGA Ars - Back



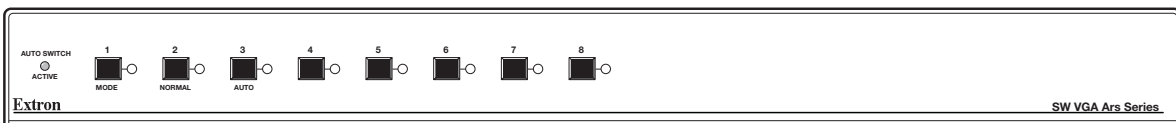
SW4 VGA Ars - Back



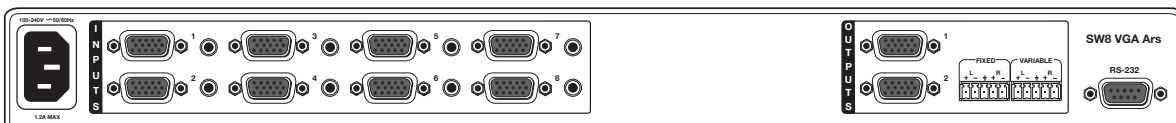
SW6 VGA Ars - Front



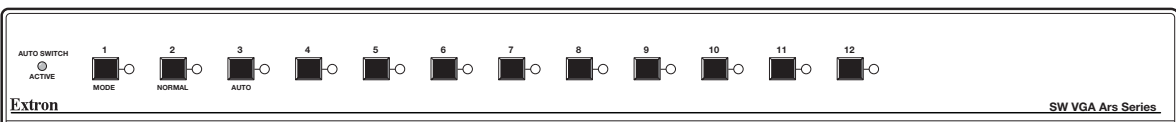
SW6 VGA Ars - Back



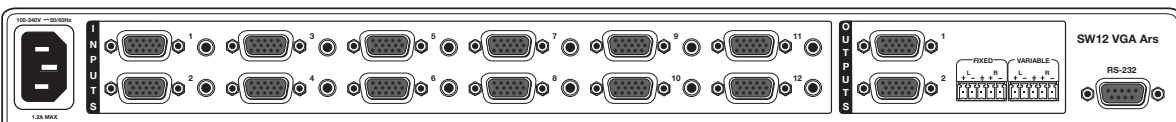
SW8 VGA Ars - Front



SW8 VGA Ars - Back



SW12 VGA Ars - Front



SW12 VGA Ars - Back



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